



Texas Department

of

Criminal Justice

CORRECTIONAL INSTITUTIONS
DIVISION

NUMBER: SM-06.07 (rev. 2)

DATE: November 4, 2011

PAGE: 1 of 3

SUPERSEDES: SM-06.07 (rev. 1)
March 1, 2003

SECURITY MEMORANDUM

SUBJECT: INCLEMENT WEATHER

REFERENCE: American Correctional Association (ACA) Standards #4-4154

Administrative Segregation Plan; TDCJ Offender Visitation Plan; AD-03.40, "Out-of-Cell Time for General Population Offenders;" SM-01.01, "Correctional Institutions Division (CID) Security Policies and Procedures Systems"

PURPOSE: - To establish uniformed policies and guidelines for the operation of offender recreation and outdoor contact visitation during periods of inclement weather conditions. Inclement weather conditions may necessitate alternate actions by unit administrations in order to ensure compliance with Texas Department of Criminal Justice (TDCJ) policies related to offender recreation and outdoor contact visitation.

DEFINITIONS:

"Recreational Facilities" include dayrooms, multi-purpose rooms, court yards, gyms, and outdoor recreational areas on TDCJ units in which offender recreation is conducted in accordance with AD-03.40, "Out-of-Cell Time for General Population Offenders," and the *Administrative Segregation Plan*.

"Contact Visitation Facilities" are specifically designated indoor and outdoor locations on TDCJ units where offender visitation activities are conducted in accordance with the *TDCJ Offender Visitation Plan*.

"National Weather Service (NWS)" is an official weather advisory entity providing public service information to the media (radio, TV, print) and others regarding alerts of extreme weather conditions, such as heat index, wind chill factors, storms, and other similar weather conditions existing in or predicted for certain geographic locations.

"Inclement Weather" is extreme weather conditions, such as thunderstorms, hurricanes, tornadoes, dust storms, blizzards, ice, rain, hail, temperatures (hot or cold), or fog, that may pose safety, health, or security risks.

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PROCEDURES:

Offender recreation and outdoor contact visitation shall be conducted in a manner that ensures a safe environment for offenders, staff, and the public. The warden shall develop unit specific procedures in accordance with SM-01.01, "Correctional Institutions Division (CID) Security Policies and Procedures Systems," for the operation of offender recreation and contact visitation areas during inclement weather conditions. The following guidelines shall be adhered to during periods when weather conditions pose safety, health, or security risks and prohibit the normal manner of operations for offender recreation and outdoor contact visitation.

I. RECREATION:

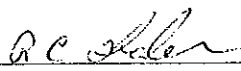
- A. The warden or designee shall remain alert for inclement weather announcements generated by sources such as the local media, including radio, TV, or print, which may pose a need to operate offender recreation in an alternate location.
- B. The warden or designee shall determine the likelihood of impact of the inclement weather conditions on the unit and determine when the unit's inclement weather policy shall go into effect. When a determination has been made that inclement weather conditions exist, outdoor offender recreation shall be relocated to indoor recreation facilities such as the gym or dayrooms. Recreation shall only be suspended when the unit is in an emergency preparedness mode due to inclement weather conditions, such as hurricanes or tornadoes.
- C. Depending on the design of the unit's recreational facilities, the warden or designee may not need to enforce the inclement weather schedule for the entire unit. For example, inclement weather conditions that justify the suspension of recreation on outdoor general population recreation yards may not justify the suspension of recreation for offenders recreating in covered outdoor recreation yards. Therefore, it is possible to operate in the inclement weather mode for general population areas and not for administrative segregation.
- D. In addition to announcements made by media and other sources regarding NWS advisories, the warden shall specifically survey the inclement weather conditions surrounding the unit to make an independent decision based on the safety and security of staff and offenders during these conditions. This decision shall be necessary during inclement weather conditions within the immediate area of the unit, to include iced-over recreation yard slabs, torrential rainfall, hail, snow and blizzard-like conditions, dust storms, thunder and lightning, wind gusts, fog, extreme temperatures (hot or cold), and other similar conditions. When these conditions have the potential to pose safety, health, or security hazards, the warden or designee shall instruct unit personnel to conduct offender recreation under the inclement weather mode. Therefore, general population and administrative segregation recreation activities shall be conducted indoors in dayrooms and gym until such inclement weather conditions are no longer in effect. The warden or designee shall determine when inclement weather conditions are no longer in effect.

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- E. When units are operating in the inclement weather mode, unit personnel shall ensure all TDCJ policies pertaining to recreation of general population and administrative segregation offenders are followed.
- F. The capacity levels of gyms shall be monitored during inclement weather to determine whether any adjustments to unit recreation schedules are warranted. Units operating an open recreation schedule may have to suspend the open recreation policy during inclement weather if conditions in indoor facilities become so crowded that offenders cannot engage in meaningful recreational activities.

II. OFFENDER CONTACT VISITS

- A. Eligible offenders may have contact visits, as permitted by the TDCJ *Offender Visitation Plan*. These visits may occur indoors, or outdoors, weather permitting. Both indoor and outdoor contact visitation facilities are available within TDCJ units to facilitate visitation for offenders and visitors.
- B. Weather conditions may, from time to time, prohibit outdoor contact visitation to ensure a safe environment for staff, the public, and offenders. The warden or designee shall determine when the use of outdoor contact visitation facilities shall be discontinued due to inclement weather conditions until the conditions no longer exist.
- C. If the warden or designee determines the use of outdoor contact visitation facilities shall be prohibited due to inclement weather conditions, the contact visitation activity shall take place in appropriate indoor facilities.


Rick Thaler, Director,
Correctional Institutions Division

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF TEXAS
HOUSTON DIVISION

STEPHEN McCOLLUM, and SANDRA §
 McCOLLUM, individually, and STEPHANIE §
 KINGREY, individually and as independent §
 administrator of the Estate of LARRY GENE §
 McCOLLUM, §

PLAINTIFFS

V.

BRAD LIVINGSTON, JEFF PRINGLE, §
 RICHARD CLARK, KAREN TATE, §
 SANDREA SANDERS, ROBERT EASON, the §
 UNIVERSITY OF TEXAS MEDICAL §
 BRANCH and the TEXAS DEPARTMENT OF §
 CRIMINAL JUSTICE. §

DEFENDANTS

CIVIL ACTION NO.
4:14-cv-3253
JURY DEMAND

Plaintiffs' Consolidated Summary Judgment Response Appendix

EXHIBIT 89



TEXAS DEPARTMENT
OF
CORRECTIONS

ADMINISTRATIVE DIRECTIVE

NUMBER: AD-10.64

DATE: September 19, 1986

PAGE 1 OF 3

SUPERCEDES:

SUBJECT: TEMPERATURE EXTREMES IN THE WORK PLACE

PURPOSE: To establish guidelines to assist the unit administration in determining safe and healthful work conditions.

AUTHORITY: AD -10.61, Safety Policy
Chapter V., Sections I,J, TDC Occupational Safety
and Health Manual.

POLICY: It is the responsibility of the Texas Department of Corrections (TDC) to provide a safe and healthful place for every employee and inmate to work. To this end, wardens, safety officers and physicians shall confer to determine acceptable work conditions (i.e., work site temperature) for turning out unit labor forces. Every reasonable effort shall be made in the interest of preventing cold/hot related hazards in the work place.

DISCUSSION: At times, employees and inmates must work in places that are extremely cold or extremely hot. Problems of heat stress are more common than those presented by a very cold environment. To assist unit officials in determining safe working conditions in both high and low temperature extremes, the following procedures and charts are provided.

PROCEDURES: The warden, assisted by the unit physician and safety officer will assess temperature extremes as they relate to work conditions to determine any hazardous conditions. In all cases of temperature-related incidents, medical personnel shall be immediately notified and upon arrival shall take control of the situation. The victim should be removed from the environment by the most expeditious means available to receive proper medical treatment.

I. Extreme cold conditions

A. Determination. The warden shall use the Windchill Index Guidelines (Attachment 1) to determine safe cold weather working conditions. Guidelines to assist the warden in his determination can be found in the TDC Safety Manual (Chapter V) and the Inmate Rule Book (Section 3.7.).

B. Symptoms. Hypothermia is a condition where the body loses heat faster than it can produce it. When this situation first occurs, blood vessels in the skin constrict in an attempt to conserve vital internal heat -- with hands and feet being affected first. If the body continues to lose heat, involuntary shivers begin -- the body's way to produce more heat (usually the first real warning sign of hypothermia). Further heat loss produces speech difficulty, forgetfulness, loss of manual dexterity, collapse, and finally death.

C. Emergency Treatment:

1. Bring the victim out of the cold and remove wet clothing;

a. Wrap the victim in warm blankets or clothing;

b. If frostbit, gently heat the affected area with warm water or warm towels;

NOTE: Do not rub the affected area nor use heating pads or hot water bottles.

c. Warm liquids (other than alcohol) should be given by mouth to the victim; and

2. Apply the "ABC" of life support (open airway; assist breathing; restore circulation) if necessary.

II. Extreme hot conditions

A. Determination. The warden shall use the Heat and Humidity Matrix (Attachment 2) to determine safe hot weather working conditions. Guidelines to assist the warden in his/her determination can be found in the TDC Safety Manual (Chapter V) and the Fundamentals of Industrial Hygiene (Chapter 12) which is available in the unit safety library. When the temperature is over 85 degrees fahrenheit, the warden shall determine whether the work environment is safe. If determined to be unsafe, precautionary guidelines shall be enacted as stated in the Heat and Humidity Matrix.

B. Symptoms.

1. Heat Stroke -- Sweating is diminished or absent. The skin is hot, dry, and flushed. Increased body temperature, which, (if uncontrolled) may lead to delirium, convulsions, and even death. Medical care is urgently needed. (See Section II.C.1.)

2. Heat Cramps -- Painful intermittent spasms of the voluntary muscles following hard physical work in a hot environment. Cramps usually occur after heavy sweating, and

often begin at the end of a work shift. (See Section II.C.2)

3. Heat Exhaustion -- Profuse sweating, weakness, rapid pulse, dizziness, nausea, and headaches. The skin is cool and sometimes pale and clammy with sweat. Body temperature is normal or subnormal. Nausea, vomiting, and unconsciousness may occur. (See Section II.C.2.)

C. Emergency Treatment:

1. For heat Stroke -- If body temperature has risen to 105F or higher, attempt to decrease victim's body temperature. Then:

a. If in the field, soak victim's clothing with cold water; lay victim down in a shaded area; elevate victim's feet eight to twelve inches; and be prepared to administer CPR;

b. Once inside, remove victim's clothing; and sponge victim's skin with cool water or rubbing alcohol, place victim in tub of cold (not iced) water, or apply cold packs; and

c. Dry the victim once his/her body temperature has been reduced to 102F.

NOTE: Care should be taken to avoid overchilling the victim after the temperature has fallen to this point; however, should the victim's temperature begin to rise again -- the cooling process should be repeated.

III. Training

A. Each Warden shall ensure that proper training is provided by the unit medical department to all supervisory personnel who manage employees and inmates; and

B. Documentation of said training shall be provided to and maintained by the unit safety officer.


O. L. McCotter
Director

HEAT AND HUMIDITY

	AIR TEMPERATURE (Degrees Fahrenheit)										
	70	75	80	85	90	95	100	105	110	115	120
Relative Humidity	Apparent Temperature										
0%	64	69	73	78	83	87	*91	*95	*99	*103	+107
10%	65	70	75	80	85	*90	*95	*100	+105	+111	+116
20%	66	72	77	82	87	*93	*99	+105	+112	+120	\$130
30%	67	73	78	84	*90	*96	*104	+113	+123	\$135	\$148
40%	68	74	79	86	*93	*101	+110	+123	\$137	\$151	
50%	69	75	81	88	*96	+107	+120	\$135	\$150		
60%	70	76	82	*90	*100	+114	\$132	\$149			
70%	70	77	85	*93	+106	+124	\$144				
80%	71	78	86	*97	+113	\$136	\$ Heatstroke imminent				
90%	71	79	88	*102	+122	+ Heatstroke possible					
100%	72	80	*91	+108	* Heat exhaustion possible						

Heat exhaustion: Staff to insure adequacy of water intake, look for signs of exhaustion. 5 minute rest break every hour.

Heatstroke possible: Staff to promote high water intake, 5 minute rest break every $\frac{1}{2}$ hour-lay down, feet up. Reduce work by $\frac{1}{3}$.

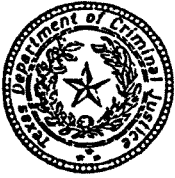
Heatstroke imminent: Secure outside work or reduce work pace by $\frac{1}{2}$ to $\frac{2}{3}$. 10 minute break every $\frac{1}{2}$ hour-lay down, feet up. Insist on excessive water intake.

Heat and Humidity: At high temperatures, the human body normally cools itself through the evaporation of perspiration. But humidity interferes with this process. The table above, from the National Weather Service, shows how discomfort and health risks grow as heat and humidity increase. Remember: Apparent temperatures may run 15 to 30 degrees higher in urban areas with their vast expanses of concrete and asphalt.

WINDCHILL INDEX

Wind speed in mph	ACTUAL THERMOMETER READING (F)									
	50	40	30	20	10	0	-10	-20	-30	-40
	EQUIVALENT TEMPERATURE (F)									
calm	50	40	30	20	10	0	-10	-20	-30	-40
5	48	37	27	16	6	-5	-15	-26	-36	-47
10	40	28	16	4	-9	-21	-33	-46	-58	-70
15	36	22	9	-5	-18	-36	-45	-58	-72	-85
20	32	18	4	-10	-25	-39	-53	-67	-82	-96
25	30	16	0	-15	-29	-44	-59	-74	-88	-104
30	28	13	-2	-18	-33	-48	-63	-79	-94	-109
35	27	11	-4	-20	-35	-49	-67	-82	-98	-113
40	26	10	-6	-21	-37	-53	-69	-85	-100	-116
Over 40 mph (little added effect)	LITTLE DANGER (for properly clothed person)				INCREASING DANGER				GREAT DANGER (Danger from freezing or exposed flesh)	

The human body senses "cold" as a result of both the air temperature and wind velocity. Cooling of exposed flesh increases rapidly as the wind velocity goes up. Frostbite can occur at relatively mild temperatures if wind penetrates the body insulation. For example, when the actual air temperature of the wind is 40°F (4.4°C) and its velocity is 30 mph (48 km/h), the exposed skin would perceive this situation as an equivalent still air temperature of 13°F (-11°C).



**Texas Department
of
Criminal Justice**

Institutional Division

Number: AD-10.64 (rev.1)
Date: December 13, 1993
Page: 1 of 7
Supersedes: AD-10.64
(Sept. 19, 1986)

ADMINISTRATIVE DIRECTIVE

SUBJECT: TEMPERATURE EXTREMES IN THE TDCJ-ID WORK PLACE (COLD/HOT)

AUTHORITY: Administrative Directive 10.61, Safety Policy; and Health Services Policy and Procedures Manual.

PURPOSE: To establish Texas Department of Criminal Justice - Institutional Division (TDCJ-ID) guidelines to assist the unit administration in the determination of safe and healthful work conditions. Guidelines for outside recreation are found in the unit recreation manual.

POLICY: It is the responsibility of the TDCJ-ID to provide a safe and healthful place for employees and inmates to work. The Unit Wardens in coordination with involved Department Heads shall confer to determine acceptable work conditions (i.e. work site temperature for turning out unit labor forces). Every reasonable effort shall be made in the interest of preventing cold/hot related injuries in the workplace. As the TDCJ-ID continues to expand and locate units throughout the State of Texas, it is apparent the decision to expose employees and/or inmates to extreme temperature (cold/hot) must be made by the on-site staff.

DISCUSSION: TDCJ-ID employees and inmates are at times required to work in conditions of extreme cold or extreme heat. Frequently, situations may occur which require the work be done regardless of the temperature or weather conditions and which dictate that appropriate clothing be worn in order to limit exposure and/or the workplace conditions be adjusted to reduce the risk of injury. Problems of heat stress are more common than those presented by a very cold environment. Procedures and charts are provided to assist unit officials in determining safe working conditions in both high and low temperature extremes. Employees and inmates must be exposed gradually to extreme heat and cold weather conditions. Individuals should be exposed to no more than 3 - 4 hours at a time, until acclimatized to existing weather conditions. Work periods may then be extended as the individual's physical adjustment occurs. Appropriate clothing must be worn to protect individuals from extreme hot/cold weather conditions at all times.

PROCEDURES: Prior to exposing workers to extreme temperature conditions (cold/hot), the Unit Warden or designee and involved department heads should obtain specific medical guidance necessary to appreciate the specific hazards and to institute measures which will prevent cold/heat injury. In all cases of temperature-related incidents and/or injuries, medical personnel must be notified immediately and upon arrival on the scene the medical personnel will take control of the situation. The victim should be removed from the existing environment by the most expeditious means available to receive proper medical treatment.

I. Extreme Cold Conditions:

A. Determination:

1. The Unit Warden shall use the Windchill Index Guidelines (Attachment A) and the local news/weather media for determining the safety of cold weather working conditions;
2. Clothing considered appropriate for inmates working in cold weather is thermal underwear, insulated green jackets, cotton gloves, insulated hoods, mittens, and heavy work shoes and socks. Insulated hoods and mittens are reserved for inmates assigned to outside work assignments or to non-heated work areas on units located north of a line formed by I-20. Inmates working south of a line formed by I-20, who are required to work outdoors or in non-heated areas during extreme cold conditions, will be provided insulated hoods and mittens. The windchill index (Attachment A) should be used to determine the need for insulated hoods and mittens south of I-20.
3. Prior to exposing workers to cold conditions, medical guidance should be requested to determine appropriate clothing and footwear to prevent cold injury;
4. Care should be taken to prevent perspiration which could soak clothing and thus compromise the insulating value of clothing; and
5. Layers of clothing should be removed or added according to the effective temperature and the level of physical activity.

B. Symptoms:

1. Hypothermia is a condition where the body loses heat faster than it can produce it. With the onset of this condition, blood vessels in the skin constrict (tighten) in an attempt to conserve vital internal body heat, thus affecting the hands and feet first;
2. If one's body continues to lose heat, involuntary shivers begin. This is the body's way to produce more heat and is usually the first real warning sign of hypothermia; and
3. Further heat loss produces speech difficulty, forgetfulness, loss of manual dexterity, collapse and finally death.

C. Emergency Treatment:

1. Bring the victim out of the cold and remove wet clothing;
2. Wrap the victim in warm blankets or clothing;

3. If frostbite exists gently heat the affected area with warm water or warm towels. Do not rub the affected area nor use heating pads or hot water bottles;
4. The medical staff will continue the treatment upon arrival at the site or when the patient is delivered to their control; and
5. Apply the "ABC" of life support (open Airway, assist Breathing, and restore Circulation), if necessary.
6. If local cold injury is sustained, field personnel should administer the following first aid procedures immediately:
 - a. Restrict individual from further duties or activities until severity is evaluated;
 - b. Remove all constricting items of clothing and footgear from injured areas;
 - c. Remove wet clothing and insulate individual with dry clothing and blankets, making sure the injured area is covered;
 - d. Prohibit not only smoking, and alcohol consumption, but also the application of medications, salves or ointments. Nicotine causes vasoconstriction, which may further decrease blood supply to injured tissue. Alcohol affects peripheral blood flow;
 - e. Do not rupture blisters;
 - f. Encourage consumption of warm, sweetened liquids;
 - g. If a lower extremity is affected, treat as a stretcher patient by elevating the affected lower extremity slightly;
 - h. If evacuation from cold requires travel on foot, do not thaw the affected area until the individual reaches medical help; and
 - i. Transport the individual to definitive medical care as soon as possible.
7. Three types of hypothermia. Hypothermics are divided into the following three categories, depending on the degree of injury:
 - a. First category victims are conscious, but cold, with rectal temperature above 90° Fahrenheit. They should be handled carefully, insulated, and transported to definitive medical care;

- b. Second category victims are unconscious and with a rectal temperature of 90° Fahrenheit or below. They, too, should be handled carefully and insulated from further heat loss. If available, provide ventilatory assistance with oxygen and administer intravenous fluid. Then, transport to definitive medical care;
- c. Third category victims are those who are comatose with no palpable pulse and no visible respiration. Although they appear to be dead, the victim may have a slight chance of recovery if the rectal temperature is 60.8° Fahrenheit (16° Centigrade) or higher. If possible, medical personnel should proceed as follows:
 - (1) Apply positive pressure ventilation with oxygen;
 - (2) Judge the possibility of administering cardiopulmonary resuscitation (CPR). The decision of whether or not to administer CPR is probably more situational than medical, yet administration is controversial. Respiratory effort is lost long before cardiac function, yet successful resuscitation after an estimated three hours of no heart beat have been reported. The number of successful resuscitations is growing rapidly with better understanding of physiology and more management experience. Consider the following before initiating CPR:
 - (a) The difficulty in verifying, in the field, that the heart has stopped;
 - (b) The compromise of rescuers to administer procedure during evacuation;
 - (c) The ability to continue CPR during rescue;
 - (d) The likelihood that chest compression will fibrillate or stop the slow-beating, sensitive heart; and
 - (e) The unlikelihood of continuing circulation by compressing a cold, stiff chest and heart muscle.
 - (3) Insulate victim and transport to definitive medical care.

II. Extreme Hot Conditions:

A. Determination:

- 1. The Unit Warden will use the Heat and Humidity Matrix (Attachment B) to determine safe hot weather working conditions;

2. Guidelines to assist the Unit Warden in his/her determination can be found in the Heat Index and by contacting the local news media to confirm specific temperature conditions;
3. When the temperature is over 85 degrees Fahrenheit, the Unit Warden will determine whether or not the work environment is safe;
4. If the temperature is determined to be unsafe, precautionary measures must be implemented as stated in the Heat and Humidity Matrix;
5. Prior to exposing workers to extremely hot working conditions, the Unit Warden or designee should consult medical sources to evaluate the hazards of the effective temperatures, and the hazard of sunburn and other results of ultraviolet radiation;
6. Workers will be provided and required to use clothing appropriate to the effective temperatures and the hazards imposed by ultraviolet radiation (usually light-weight, long-sleeved shirts can be used to an advantage in high heat and direct sunlight);
7. Drinking water will always be available to workers in conditions of hot weather. Sodium-containing liquids may be used; according to individual medical advice, depending on a worker's state of acclimatization to hot weather working conditions;
8. Newly-assigned workers who may not be acclimatized to the heat should be evaluated medically prior to being subjected to significant heat stress and should be closely monitored by supervisors for early evidence of heat intolerance;
9. High water intake, according to Attachment B of this directive, should be enforced; and
10. Inmates under treatment with diuretics and/or drugs which inhibit sweating require special medical evaluation when assigned to work in extreme heat.

B. Symptoms:

1. Heat Stroke symptoms are as follows:
 - a. Perspiring (sweating) is diminished or absent;
 - b. The skin is hot, dry and flushed;
 - c. Increased body temperatures, which if uncontrolled may lead to delirium, convulsions and even death; and
 - d. Medical care is urgently needed.

2. Heat Cramps symptoms include the following:

- a. Painful intermittent spasms of the voluntary muscles following hard physical work in a hot environment; and
- b. Cramps usually occur after heavy perspiring, and often begin at the end of a work shift.

3. Heat Exhaustion symptoms are as follows:

- a. Profuse perspiring, weakness, rapid pulse, dizziness, nausea and headaches;
- b. The skin is cool and sometimes pale and clammy with perspiration;
- c. Body temperature is normal or subnormal; and
- d. Nausea, vomiting and unconsciousness may occur.

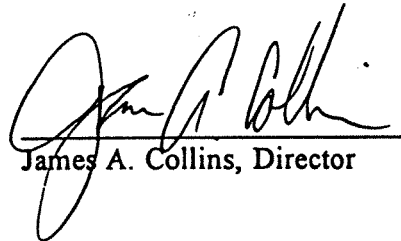
C. Emergency Treatment:

1. In all cases of temperature-related incidents and/or injuries, the First Aid process is to be initiated immediately by either security personnel or by other TDCJ-ID personnel;
2. The on-site personnel must immediately begin an attempt to decrease the patient's temperature by placing the patient in a cool area;
3. All clothing of the patient should be saturated with water and the victim should be forced to drink fluids (i.e. water);
4. All of these measures are to be taken while moving the patient in the most expeditious means available to continue with and obtain proper medical treatment; and
5. Whenever medical staff are on-site, treatment is to continue as directed by the physician and/or medical staff.

III. Training:

- A. Each Unit Warden must ensure that training in the prevention of temperature extreme injury is provided by the unit Medical Department to all supervisory personnel who manage employees and inmates.
- B. Documentation of completed training by name and social security number shall be maintained by the Unit Health Administrator.

- C. A standardized training program will be developed by the Director of Medical Training and Continuing Education:
1. The initial cold/hot training is provided in the Pre-Service and In-Service Training sessions;
 2. The training given in a group setting, however, is not to the extent necessary to ensure that select unit staff personnel are presented adequate training;
 3. All units are responsible for an annual refresher standardized training program;
 4. Hot weather training would be best served if given during the March and April timeframe;
 5. Cold weather training should be completed during the months of September and October.
- IV. This administrative directive supersedes Occupational Safety and Health Manual 5-I-1, "Cold Weather Work Policy" (dated December 29, 1988); and Rules and Regulations and Grievance Procedures 3.7.1., "Outdoor Work" (printed February 27, 1978).



James A. Collins, Director

WINDCHILL INDEX

Wind speed in mph	ACTUAL THERMOMETER READING (F)									
	50	40	30	20	10	0	-10	-20	-30	-40
	EQUIVALENT TEMPERATURE (F)									
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20	32	18	4	-10	-25	-39	-53	-67	-82	-96
25	30	16	0	-15	-29	-44	-59	-74	-88	-104
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40	26	10	-6	-21	-37	-53	-69	-85	-100	-116
Over 40 mph (little added effect)	LITTLE DANGER (for properly clothed person)				INCREASING DANGER			GREAT DANGER (Danger from freezing or exposed flesh)		

The human body senses "cold" as a result of both the air temperature and wind velocity. Cooling of exposed flesh increases rapidly as the wind velocity goes up. Frostbite can occur at relatively mild temperatures if wind penetrates the body insulation. For example, when the actual air temperature of the wind is 40 degrees Fahrenheit (4.4 degrees Celsius) and its velocity is 30 mph (48 km/h), the exposed skin would perceive this situation as an equivalent still air temperature of 13 degrees Fahrenheit (-11 degrees Celsius).

Clothing considered appropriate and currently available in the inventory is thermal underwear, insulated green coats, cotton gloves, insulated hoods, mittens, and the heavy work shoes with socks. Again, caution must be taken when exposed for longer period of time occurs.

HEAT AND HUMIDITY

		AIR TEMPERATURE (Degrees Fahrenheit)										
		70	75	80	85	90	95	100	105	110	115	120
Relative Humidity	Apparent Temperature											
0%	64	69	73	78	83	87	*91	*95	*99	*103	+107	
10%	65	70	75	80	85	*90	*95	*100	+105	+111	+116	
20%	66	72	77	82	87	*93	*99	+105	+112	+120	\$130	
30%	67	73	78	84	*90	*96	*104	+113	+123	\$135	\$148	
40%	68	74	79	86	*93	*101	+110	+123	\$137	\$151		
50%	69	75	81	88	*96	*107	+120	\$135	\$150			
60%	70	76	82	*90	*100	*114	\$132	\$149				
70%	70	77	85	*93	+106	+124	\$144					
80%	71	78	86	*97	+113	\$136	\$ Heatstroke imminent					
90%	71	79	88	*102	+122	+ Heatstroke possible						
100%	72	80	*91	+108	* Heat exhaustion possible							

Heat exhaustion: Staff to insure adequacy of water intake, look for signs of exhaustion. 5 minute rest break every hour.

Heatstroke possible: Staff to promote high water intake, 5 minute rest break every $\frac{1}{2}$ hour-lay down, feet up. Reduce work by $\frac{1}{3}$.

Heatstroke imminent: Secure outside work or reduce work pace by $\frac{1}{2}$ to $\frac{2}{3}$. 10 minute break every $\frac{1}{2}$ hour-lay down, feet up. Insist on excessive water intake.

Heat and Humidity: At high temperatures, the human body normally cools itself through the evaporation of perspiration. But humidity interferes with this process. The table above, from the National Weather Service, shows how discomfort and health risks grow as heat and humidity increase. Remember: Apparent temperatures may run 15 to 30 degrees higher in urban areas with their vast expanses of concrete and asphalt.

7/29/98

Wayne Scott signed for
Art Mosley - Mr. Mosley
out of town for the week
& this policy became high
priority

DEPARTMENT

NUMBER: AD-10.64 (rev. 2)**DATE:** July 29, 1998

JUSTICE

PAGE: 1 of 10**SUPERSEDES:** AD-10.64 (rev. 1)
December 13, 1993

W/ E DIRECTIVE

SUBJECT: 85 TEMPERATURE EXTREMES IN THE TDCJ WORK PLACE**AUTHORITY:** Section 493.006, Texas Government Code**APPLICABILITY:** Texas Department of Criminal Justice (TDCJ)**POLICY:**

The purpose of this policy is to establish TDCJ guidelines to assist the unit/facility administration in the determination of safe work conditions. Guidelines for outside recreation are found in the *Recreation Manual*.

It is the responsibility of the TDCJ to provide a safe and healthful place for offenders to work. The Warden, in coordination with involved Department Heads, shall confer to determine acceptable work conditions (i.e., work site temperature for turning out labor forces). Every reasonable effort shall be made to prevent extreme temperature-related injuries in the workplace. As the TDCJ continues to expand and locate units/facilities throughout the State of Texas, it is apparent the decision to expose offenders to extreme temperature (cold/hot) must be made by the on-site staff.

TDCJ offenders are, at times, required to work in conditions of extreme cold or extreme heat. Frequently, situations may occur that require the work be done regardless of the temperature or weather conditions. These situations dictate that appropriate clothing be worn in order to limit exposure. Problems of heat stress are more common than those presented by a very cold environment. Procedures and charts are provided to assist unit/facility officials in determining safe working conditions in both high and low temperature extremes. Offenders must be exposed gradually to extreme heat and cold weather conditions. Individuals should be exposed to no more than three (3) - four (4) hours at a time, until acclimated to existing weather conditions. Work periods may then be extended as the individual's physical adjustment occurs. Appropriate clothing must be worn to protect individuals from extreme hot/cold weather conditions at all times.

PROCEDURES:

Prior to exposing offenders to extreme temperature conditions (cold/hot), the Warden and involved Department Heads will ensure that appropriate measures are instituted which shall prevent cold/heat injury. The Warden and involved Department Heads are encouraged to consult medical staff to ascertain specific hazards. In all cases of temperature-related incidents or injuries, medical personnel must be notified immediately and upon arrival on the scene, the medical personnel shall take control of the situation. The injured individual should be removed from the existing environment by the most expeditious means available to receive proper medical treatment.

I. Extreme Cold Conditions**A. Determination**

1. The Warden shall use the Wind-Chill Index guidelines (Attachment A) and the local news/weather media for determining the safety of cold weather working conditions.
2. Clothing considered appropriate for offenders working in cold weather is thermal underwear, insulated jackets, cotton gloves, insulated hoods, mittens, and heavy work shoes and socks. Insulated hoods and mittens are generally reserved for offenders assigned to outside work assignments or to non-heated work areas on units/facilities located north of a line formed by Interstate 20 (I-20). Offenders working south of a line formed by I-20, who are required to work outdoors or in non-heated areas during cold conditions, shall be provided insulated hoods and mittens. The Wind-Chill Index (Attachment A) should be used to determine the need for insulated hoods and mittens south of I-20. Appropriate clothing should be issued even when the index indicates little danger of exposure.
3. Prior to exposing offenders to cold conditions, medical guidance should be requested to determine appropriate clothing and footwear to prevent cold injury.
4. Care should be taken to prevent perspiration which could soak clothing and thus compromise the insulating value of clothing.
5. Layers of clothing should be removed or added according to the effective temperature and the level of physical activity.

B. Symptoms

1. Hypothermia is a condition where the body loses heat faster than it can produce it. With the onset of this condition, blood vessels in the skin

constrict (tighten) in an attempt to conserve vital internal body heat, thus affecting the hands and feet first.

2. If one's body continues to lose heat, involuntary shivers begin. This reaction is the body's way to produce more heat and is usually the first real warning sign of hypothermia.
3. Further heat loss produces speech difficulty, forgetfulness, loss of manual dexterity, collapse, and finally death.

C. Emergency Treatment

1. Bring the injured individual out of the cold and remove wet clothing.
2. Wrap the injured individual in warm blankets or clothing.
3. If frostbite exists, gently heat the affected area with warm water or warm towels. Do not rub the affected area, use heating pads, or hot water bottles.
4. The medical staff shall continue the treatment upon arrival at the site or when the patient is delivered to their control.
5. Apply the "ABC" of life support (open Airway, assist Breathing, and restore Circulation), if necessary.
6. If local cold injury is sustained, field personnel should administer the following First Aid procedures immediately.
 - a. Restrict individual from further duties or activities until severity is evaluated.
 - b. Remove all constricting items of clothing and footwear from injured areas.
 - c. Remove wet clothing and insulate individual with dry clothing and blankets, making sure the injured area is covered.
 - d. Prohibit smoking and the application of medications, salves, or ointments. Nicotine causes vasoconstriction, which may further decrease blood supply to injured tissue. Alcohol affects peripheral blood flow.
 - e. Do not rupture blisters.

- f. Encourage consumption of warm, sweetened liquids.
- g. If a lower extremity is affected, treat as a stretcher patient by slightly elevating the affected lower extremity.
- h. If evacuation from cold requires travel on foot, do not thaw the affected area until the individual reaches medical help.
- i. Transport the individual to definitive medical care as soon as possible.

7. Types of Hypothermia

Hypothermics are divided into the following three (3) categories, depending on the degree of injury.

- a. First category injured individuals are conscious, but cold, with rectal temperature above 90 degrees Fahrenheit. They should be handled carefully, insulated, and transported to definitive medical care.
- b. Second category injured individuals are unconscious and with a rectal temperature of 90 degrees Fahrenheit or below. They should be handled carefully and insulated from further heat loss. If available, provide ventilatory assistance with oxygen and administer intravenous fluid. Then, transport to definitive medical care.
- c. Third category injured individuals are those who are comatose with no palpable pulse and no visible respiration. Although they appear to be dead, the injured individual may have a slight chance of recovery if the rectal temperature is 60.8 degrees Fahrenheit (16 degrees Centigrade) or higher. If possible, medical personnel should proceed as follows:
 - 1) Apply positive pressure ventilation with oxygen.
 - 2) Judge the possibility of administering cardiopulmonary resuscitation (CPR). The decision of whether to administer CPR is probably more situational than medical, yet administration is controversial. Respiratory effort is lost long before cardiac function; yet, successful resuscitations after an estimated three (3) hours of no heart beat have been reported. The number of successful resuscitations is growing rapidly with better understanding of physiology

and more management experience. Consider the following before initiating CPR:

- a) The difficulty in verifying, in the field, that the heart has stopped;
 - b) The compromise of rescuers to administer procedure during evacuation;
 - c) The ability to continue CPR during rescue;
 - d) The likelihood that chest compression shall fibrillate or stop the slow-beating, sensitive heart; and
 - e) The unlikelihood of continuing circulation by compressing a cold, stiff chest and heart muscle.
- 3) Insulate injured individual and transport to definitive medical care.

II. Extreme Hot Conditions

A. Determination

1. The Warden shall use the Heat and Humidity Matrix (Attachment B) to determine the heat index which is a factor in determining safe hot weather working conditions.
2. Guidelines to assist the Warden in making the determination can be found in the Heat and Humidity Matrix and by contacting the local news media to confirm specific temperature conditions.
3. When the temperature is over 85 degrees Fahrenheit, the Warden shall determine whether or not the work environment is safe.
4. If the combination of temperature and humidity indicates that at least heat exhaustion is possible, precautionary measures must be implemented as stated in the Heat and Humidity Matrix.
5. Prior to exposing offenders to extremely hot working conditions, the Warden is encouraged to consult medical sources to evaluate the hazards of the effective temperatures, and the hazard of sunburn and other results of ultraviolet radiation.

6. Offenders shall be provided and required to use clothing appropriate to the effective temperatures and the hazards imposed by ultraviolet radiation (usually light-weight, long-sleeved shirts can be used to an advantage in high heat and direct sunlight). Light hats are also recommended.
7. Drinking water shall always be available to offenders in conditions of hot weather. Sodium-containing liquids may be used, according to individual medical advice, depending on a offender's state of acclimatization to hot weather working conditions.
8. Newly assigned offenders, who may not be acclimated to the heat, should be evaluated medically prior to being subjected to significant heat stress, and should be closely monitored by supervisors for early evidence of heat intolerance.
9. High water intake, according to the Heat and Humidity Matrix, should be enforced.
10. Offenders under treatment with diuretics or drugs which inhibit sweating require special medical evaluation when assigned to work in extreme heat.

B. Symptoms

1. Heat Stroke symptoms are as follows:
 - a. Perspiring (sweating) is diminished or absent;
 - b. The skin is hot, dry, and flushed; and
 - c. Increased body temperatures, which if uncontrolled may lead to delirium, convulsions, and even death. Medical care is urgently needed.
2. Heat Cramps symptoms include the following:
 - a. Painful, intermittent spasms of the voluntary muscles following hard physical work in a hot environment; and
 - b. Cramps usually occur after heavy perspiring, and often begin at the end of a work shift.
3. Heat Exhaustion symptoms are as follows:
 - a. Profuse perspiring, weakness, rapid pulse, dizziness, nausea, and headaches;

- b. The skin is cool and sometimes pale and clammy with perspiration;
- c. Body temperature is normal or subnormal; and
- d. Nausea, vomiting, and unconsciousness may occur.

C. Emergency Treatment

- 1. In all cases of temperature-related incidents or injuries, the First Aid process is to be initiated immediately by either security personnel or by other TDCJ personnel.
- 2. The on-site personnel must immediately begin an attempt to decrease the offender's temperature by placing the offender in a cool area.
- 3. All clothing of the offender should be saturated with water and the injured individual should be forced to drink fluids (i.e., water).
- 4. All of these measures are to be taken while moving the offender in the most expeditious means available to continue with and obtain proper medical treatment.
- 5. Whenever medical staff are on-site, treatment is to continue as directed by the physician or medical staff.
- 6. In all cases of temperature related incidents or injuries, medical staff and the unit/facility Risk Management Coordinator shall be notified immediately.

III. Training

- A. Each Warden must ensure that training in the prevention of temperature extreme injury is provided by the unit/facility Medical Department to all supervisory personnel who manage offenders.
- B. Documentation of completed training by name and social security number shall be maintained by the Manager of Health Services/Facility Health Administrator. A copy of all training rosters shall be provided to the unit/facility Risk Management Coordinator and Human Resources representative (staff training).
- C. A standardized training program shall be developed by the Correctional Managed Care Department of Education and Professional Development.

1. The initial extreme temperature conditions (cold/hot) training is provided in the Pre-Service and In-Service Training sessions.
2. The training is given in a group setting, however, not to the extent necessary to ensure that select unit/facility staff personnel are presented adequate training.
3. All units/facilities are responsible for an annual refresher standardized training program.
4. Hot weather training would be best served if given during the March and April time frame.
5. Cold weather training should be completed during the months of September and October.


Art Mosley
Deputy Executive Director

WIND-CHILL INDEX

Wind Speed in MPH	ACTUAL THERMOMETER READING (F)									
	50	40	30	20	10	0	-10	-20	-30	-40
	EQUIVALENT TEMPERATURE (F)									
CALM	50	40	30	20	10	0	-10	-20	-30	-40
5	48	37	27	16	6	-5	-15	-26	-36	-47
10	40	28	16	4	-9	-21	-33	-46	-58	-70
15	36	22	9	-5	-18	-36	-45	-58	-72	-85
20	32	18	4	-10	-25	-39	-53	-67	-82	-96
25	30	16	0	-15	-29	-44	-59	-74	-88	-104
30	28	13	-2	-18	-33	-48	-63	-79	-94	-109
35	27	11	-4	-20	-35	-49	-67	-82	-98	-113
40	26	10	-6	-21	-37	-53	-69	-85	-100	-116
Over 40 MPH (little added effect)	LITTLE DANGER (for properly clothed person)				INCREASING DANGER			GREAT DANGER		
	(Danger from freezing or exposed flesh)									

The human body senses “cold” as a result of both the air temperature and wind velocity. Cooling of exposed flesh increases rapidly as the wind velocity goes up. Frostbite can occur at relatively mild temperatures if wind penetrates the body insulation. For example, when the actual air temperature of the wind is 40 degrees Fahrenheit (4.4 degrees Celsius) and its velocity is 30 mph (48 km/h), the exposed skin would perceive this situation as an equivalent still air temperature of 13 degrees (-11 degrees Celsius).

Clothing considered appropriate and currently available in the inventory is thermal underwear, insulated coats, cotton gloves, insulated hoods, mittens, and the heavy work shoes with socks. Again, caution must be taken when exposure for longer periods of time occurs.

HEAT and HUMIDITY MATRIX

	AIR TEMPERATURE (Degrees Fahrenheit)										
	70	75	80	85	90	95	100	105	110	115	120
Relative Humidity	Apparent Temperature										
0%	64	69	73	78	83	87	*91	*95	*99	*103	+107
10%	65	70	75	80	85	*90	*95	*100	+105	+111	+116
20%	66	72	77	82	87	*93	*99	+105	+112	+120	\$130
30%	67	73	78	84	*90	*96	*104	+113	+123	\$135	\$148
40%	68	74	79	86	*93	*101	+110	+123	\$137	\$151	
50%	69	75	81	88	*96	+107	+120	\$135	\$150		
60%	70	76	82	*90	*100	+114	\$132	\$149			
70%	70	77	85	*93	+106	+124	\$144				
80%	71	78	86	*97	+113	\$136					
90%	71	79	88	*102	+122						
100%	72	80	*91	+108							

\$ - Heatstroke imminent

+ - Heatstroke possible

* - Heat exhaustion possible

Heat exhaustion: Staff to ensure adequacy of water intake, look for signs of exhaustion. Five (5) minute rest breaks every hour.

Heatstroke possible: Staff to promote high water intake, five (5) minute rest break every one-half (1/2) hour-lay down, feet up. Reduce work by one-third (1/3).

Heatstroke imminent: Secure outside work or reduce work pace by one-half (1/2) to two-thirds (2/3). Ten (10) minute break every one-half (1/2) hour-lay down, feet up. Insist on excessive water intake.

Heat and Humidity: At high temperatures, the human body normally cools itself through the evaporation of perspiration. But humidity interferes with this process. The table above, from the National Weather Service, shows how discomfort and health risks grow as heat and humidity increase. Remember: Apparent temperatures may run 15 to 30 degrees higher in urban areas with their vast expanses of concrete and asphalt.

HEAT a IX

	AIR TEMPERATURE (Degrees Fahrenheit)										
	70	75	80	85	90	95	100	105	110	115	120
Relative Humidity	Apparent Temperature										
0%	64	69	73	78	83	87	*91	*95	*99	*103	+107
10%	65	70	75	80	85	*90	*95	*100	+105	+111	+116
20%	66	72	77	82	87	*93	*99	+105	+112	+120	\$130
30%	67	73	78	84	*90	*96	*104	+113	+123	\$135	\$148
40%	68	74	79	86	*93	*101	+110	+123	\$137	\$151	
50%	69	75	81	88	*96	+107	+120	\$135	\$150		
60%	70	76	82	*90	*100	+114	\$132	\$149			
70%	70	77	85	*93	+106	+124	\$144				
80%	71	78	86	*97	+113	\$136					
90%	71	79	88	*102	+122						
100%	72	80	*91	+108							

\$ - Heatstroke imminent

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* - Heat exhaustion possible

Heat exhaustion: Staff to ensure adequacy of water intake, look for signs of exhaustion. Five (5) minute rest breaks every hour.

Heatstroke possible: Staff to promote high water intake, five (5) minute rest break every one-half (1/2) hour-lay down, feet up. Reduce work by one-third (1/3).

Heatstroke imminent: Secure outside work or reduce work pace by one-half (1/2) to two-thirds (2/3). Ten (10) minute break every one-half (1/2) hour-lay down, feet up. Insist on excessive water intake.

Heat and Humidity: At high temperatures, the human body normally cools itself through the evaporation of perspiration. But humidity interferes with this process. The table above, from the National Weather Service, shows how discomfort and health risks grow as heat and humidity increase. Remember: Apparent temperatures may run 15 to 30 degrees higher in urban areas with their vast expanses of concrete and asphalt.



TEXAS DEPARTMENT

OF

CRIMINAL JUSTICE

NUMBER: AD-10.64 (rev. 3)

DATE: August 3, 1999

PAGE: 1 of 10

SUPERSEDES: AD-10.64 (rev. 2)
July 29, 1998

ADMINISTRATIVE DIRECTIVE

SUBJECT: TEMPERATURE EXTREMES IN THE TDCJ WORK PLACE

AUTHORITY: Section 493.006, Texas Government Code

Reference: American Correctional Association (ACA) standards: 3-4146
and 3-4318

APPLICABILITY: Texas Department of Criminal Justice (TDCJ or Agency)

POLICY:

The purpose of this policy is to establish TDCJ guidelines to assist the unit/facility administration to adapt offender work assignments to temperatures in the work environment that cannot be controlled by the Agency. Guidelines for outside recreation are found in the *Recreation Manual*.

Every reasonable effort shall be made to prevent extreme temperature-related injuries in the workplace. As the TDCJ continues to expand and locate units/facilities throughout the State of Texas, it is apparent the decision of whether to expose offenders to extreme temperature (cold/heat) must be made by the on-site staff.

TDCJ offenders are, at times, required to work in conditions of extreme cold or extreme heat. Frequently, situations may occur that require the work be done regardless of the temperature or weather conditions. Problems of heat stress are more common than those presented by a very cold environment. Procedures and charts are provided to assist unit/facility officials in determining safe working conditions in both high and low temperature extremes. Offenders must be exposed gradually to extreme heat and cold weather conditions. Individuals should be exposed to no more than three (3) to four (4) hours at a time, until acclimated to existing weather conditions. Work periods may then be extended as the individual's physical adjustment occurs. Appropriate clothing must be worn to protect individuals from extreme hot/cold weather conditions at all times.

PROCEDURES:

Prior to exposing offenders to extreme temperature conditions (cold/heat), the Warden and involved Department Heads will ensure that appropriate measures are instituted which shall prevent cold/heat injury. The Warden and involved Department Heads are encouraged to consult medical staff to ascertain specific hazards. In all cases of temperature-related incidents or injuries, medical personnel must be notified immediately and upon arrival on the scene, the medical personnel shall take control of the situation. The injured individual should be removed from the existing environment by the most expeditious means available to receive proper medical treatment.

I. Extreme Cold Conditions**A. Determination**

1. The Warden shall use the Wind-Chill Index guidelines (Attachment A) and the local news/weather media for determining the safety of cold weather working conditions.
2. Clothing considered appropriate for offenders working in cold weather is thermal underwear, insulated jackets, cotton gloves, insulated hoods, leather gloves, and heavy work shoes and socks. Insulated hoods and leather gloves are generally reserved for offenders assigned to outside work assignments or to non-heated work areas on units/facilities located north of a line formed by Interstate 20 (I-20). Offenders working south of a line formed by I-20, who are required to work outdoors or in non-heated areas during cold conditions, shall also be provided insulated hoods, and leather gloves. The Wind-Chill Index (Attachment A) should be used to determine the need for insulated hoods, and leather gloves south of I-20. Appropriate clothing should be issued even when the index indicates little danger of exposure injury.
3. If guidance is needed, the medical department should be contacted to determine appropriate clothing and footwear to prevent cold injury, prior to exposing offenders to cold conditions.
4. Care should be taken to prevent perspiration which could soak clothing and thus compromise the insulating value of clothing.
5. Layers of clothing should be removed or added according to the effective temperature and the level of physical activity.

B. Symptoms

1. Hypothermia is a condition where the body loses heat faster than it can produce it. With the onset of this condition, blood vessels in the skin constrict (tighten) in an attempt to conserve vital internal body heat, thus affecting the hands and feet first.
2. If one's body continues to lose heat, involuntary shivers begin. This reaction is the body's way to produce more heat and is usually the first real warning sign of hypothermia.
3. Further heat loss produces speech difficulty, forgetfulness, loss of manual dexterity, collapse, and finally death.

C. Emergency Treatment

1. Bring the injured individual out of the cold and remove wet clothing.
2. Wrap the injured individual in warm blankets or clothing.
3. If frostbite exists, gently heat the affected area with warm water or warm towels. Do not rub the affected area, use heating pads, or hot water bottles.
4. The medical staff shall continue the treatment upon arrival at the site or when the patient is delivered to their control.
5. Apply the "ABC" of life support (open Airway, assist Breathing, and restore Circulation), if necessary.
6. If local cold injury is sustained, field personnel should administer the following First Aid procedures immediately.
 - a. Restrict individual from further duties or activities until severity is evaluated.
 - b. Remove all constricting items of clothing and footgear from injured areas.
 - c. Remove wet clothing and insulate individual with dry clothing and blankets, making sure the injured area is covered.
 - d. Do not rupture blisters.
 - e. Encourage consumption of warm, sweetened liquids.

- f. If a lower extremity is affected, treat as a stretcher patient by slightly elevating the affected lower extremity.
- g. If evacuation from cold requires travel on foot, do not thaw the affected area until the individual reaches medical help.
- h. Transport the individual to definitive medical care as soon as possible.

7. Types of Hypothermia

Hypothermics are divided into the following three (3) categories, depending on the degree of injury.

a. First category

Injured individuals are conscious, but cold, with rectal temperature above 90 degrees Fahrenheit. They should be handled carefully, insulated, and transported to definitive medical care.

b. Second category

Injured individuals are unconscious and with a rectal temperature of 90 degrees Fahrenheit or below. They should be handled carefully and insulated from further heat loss. If available, provide ventilatory assistance with oxygen and administer intravenous fluid. Then, transport to definitive medical care.

c. Third category

Injured individuals are those who are comatose with no palpable pulse and no visible respiration. Although they appear to be dead, the injured individual may have a slight chance of recovery if the rectal temperature is 60.8 degrees Fahrenheit (16 degrees Centigrade) or higher. If possible, medical personnel should proceed as follows:

- 1) Apply positive pressure ventilation with oxygen.
- 2) Judge the possibility of administering cardiopulmonary resuscitation (CPR). The decision of whether to administer CPR is probably more situational than medical, yet administration is controversial. Respiratory effort is lost long before cardiac function; yet, successful resuscitations

after an estimated three (3) hours of no heart beat have been reported. The number of successful resuscitations is growing rapidly with better understanding of physiology and more management experience. Consider the following before initiating CPR:

- a) The difficulty in verifying, in the field, that the heart has stopped;
 - b) The compromise of rescuers to administer procedure during evacuation;
 - c) The ability to continue CPR during rescue;
 - d) The likelihood that chest compression shall fibrillate or stop the slow-beating, sensitive heart; and
 - e) The unlikelihood of continuing circulation by compressing a cold, stiff chest and heart muscle.
- 3) Insulate injured individual and transport to definitive medical care.

II. Extreme Heat Conditions

A. Determination

1. The Warden shall use the Heat and Humidity Matrix (Attachment B) to determine the heat index which is a factor in determining safe hot weather working conditions.
2. Guidelines to assist the Warden in making the determination can be found in the Heat and Humidity Matrix and by contacting the local news media to confirm specific temperature conditions.
3. When the temperature is over 85 degrees Fahrenheit, the Warden shall determine whether or not the work environment is safe by referring to the Heat and Humidity Matrix (Attachment B). At any point when the heat and humidity index indicates the possibility of heat exhaustion or heatstroke, the Warden will direct that the precautionary measures identified in the Heat and Humidity Matrix (Attachment B) be initiated immediately.

4. If the combination of temperature and humidity indicates that at least heat exhaustion is possible, precautionary measures must be implemented as stated in the Heat and Humidity Matrix (Attachment B).
5. If guidance is needed, the Warden is encouraged to consult medical sources to evaluate the hazards of the effective temperatures, and the hazard of sunburn and other results of ultraviolet radiation, prior to exposing offenders to extremely hot working conditions.
6. Offenders shall be provided and required to use clothing appropriate to the effective temperatures and the hazards imposed by ultraviolet radiation (usually light-weight, long-sleeved shirts can be used to an advantage in high heat and direct sunlight). Light hats are also recommended.
7. Drinking water shall always be available to offenders in conditions of hot weather. Sodium-containing liquids may be used, according to individual medical advice, depending on a offender's state of acclimatization to hot weather working conditions.
8. Newly assigned offenders, who may not be acclimated to the heat, should be evaluated medically prior to being subjected to significant heat stress, and should be closely monitored by supervisors for early evidence of heat intolerance.
9. High water intake, according to the Heat and Humidity Matrix (Attachment B), should be enforced.
10. Offenders under treatment with diuretics or drugs which inhibit sweating require special medical evaluation prior to assignment to work in extreme heat.

B. Symptoms

1. Heat Stroke symptoms are as follows:
 - a. Perspiring (sweating) is diminished or absent;
 - b. The skin is hot, dry, and flushed; and
 - c. Increased body temperatures, which if uncontrolled may lead to delirium, convulsions, and even death. Medical care is urgently needed.

2. Heat Cramps symptoms include the following:
 - a. Painful, intermittent spasms of the voluntary muscles following hard physical work in a hot environment; and
 - b. Cramps usually occur after heavy perspiring, and often begin at the end of a work shift.
3. Heat Exhaustion symptoms are as follows:
 - a. Profuse perspiring, weakness, rapid pulse, dizziness, nausea, and headaches;
 - b. The skin is cool and sometimes pale and clammy with perspiration;
 - c. Body temperature is normal or subnormal; and
 - d. Nausea, vomiting, and unconsciousness may occur.

C. Emergency Treatment

1. In all cases of temperature-related incidents or injuries, the First Aid process is to be initiated immediately by either security personnel or by other unit/facility staff.
2. The on-site personnel must immediately begin an attempt to decrease the offender's temperature by placing the offender in a cool area.
3. Only force oral fluid intake if the offender is conscious and able to safely swallow.
4. Remove heavy clothing or excess layers of clothing; saturate remaining lightweight clothing with water. Position victim in the shade with air movement past the victim; fan victim if necessary to create air movement.
5. If ice is available, put ice packs in armpit and groin areas.
6. All of these measures are to be taken while moving the offender in the most expeditious means available to continue with and obtain proper medical treatment.
7. Whenever medical staff are on-site, treatment is to continue as directed by the physician or medical staff.

8. In all cases of temperature related incidents or injuries, medical staff and the unit/facility Risk Management Coordinator shall be notified immediately.

III. Training

- A. Each Warden must ensure that training in the prevention of temperature extreme injury is provided by the unit/facility Medical Department to all supervisory personnel who manage offenders.
- B. Documentation of completed training by name and social security number shall be maintained by the Manager of Health Services/Facility Health Administrator. A copy of all training rosters shall be provided to the unit/facility Risk Management Coordinator and Human Resources representative (staff training). Additionally, all staff training will be documented on the In-Service Training Record (TNG-99).
- C. A standardized training program shall be developed by the TDCJ Department of Preventive Medicine in conjunction with the UTMB Department of Education and Professional Development.
 1. The initial extreme temperature conditions training is provided in the Pre-Service and In-Service Training sessions.
 2. The training is given in a group setting.
 3. All units/facilities are responsible for conducting an annual refresher standardized training program utilizing unit/facility-based medical staff.
 4. Requests for selected unit/facility training must be addressed to the TDCJ Director of Preventive Medicine.



Art Mosley
Deputy Executive Director

WIND-CHILL INDEX

Wind Speed in MPH	ACTUAL THERMOMETER READING (F)									
	50	40	30	20	10	0	-10	-20	-30	-40
	EQUIVALENT TEMPERATURE (F)									
CALM	50	40	30	20	10	0	-10	-20	-30	-40
5	48	37	27	16	6	-5	-15	-26	-36	-47
10	40	28	16	4	-9	-21	-33	-46	-58	-70
15	36	22	9	-5	-18	-36	-45	-58	-72	-85
20	32	18	4	-10	-25	-39	-53	-67	-82	-96
25	30	16	0	-15	-29	-44	-59	-74	-88	-104
30	28	13	-2	-18	-33	-48	-63	-79	-94	-109
35	27	11	-4	-20	-35	-49	-67	-82	-98	-113
40	26	10	-6	-21	-37	-53	-69	-85	-100	-116
Over 40 MPH (little added effect)	LITTLE DANGER (for properly clothed person)				INCREASING DANGER			GREAT DANGER		
					(Danger from freezing or exposed flesh)					

The human body senses “cold” as a result of both the air temperature and wind velocity. Cooling of exposed flesh increases rapidly as the wind velocity goes up. Frostbite can occur at relatively mild temperatures if wind penetrates the body insulation. For example, when the actual air temperature of the wind is 40 degrees Fahrenheit (4.4 degrees Celsius) and its velocity is 30 mph (48 km/h), the exposed skin would perceive this situation as an equivalent still air temperature of 13 degrees (-11 degrees Celsius).

Clothing considered appropriate and currently available in the inventory is thermal underwear, insulated coats, cotton gloves, insulated hoods, and the heavy work shoes with socks. Again, caution must be taken when exposure for longer periods of time occurs.

HEAT and HUMIDITY MATRIX

Relative Humidity	AIR TEMPERATURE (Degrees Fahrenheit)										
	70	75	80	85	90	95	100	105	110	115	120
	Apparent Temperature										
0%	64	69	73	78	83	87	*91	*95	*99	*103	+107
10%	65	70	75	80	85	*90	*95	*100	+105	+111	+116
20%	66	72	77	82	87	*93	*99	+105	+112	+120	\$130
30%	67	73	78	84	*90	*96	*104	+113	+123	\$135	\$148
40%	68	74	79	86	*93	*101	+110	+123	\$137	\$151	
50%	69	75	81	88	*96	+107	+120	\$135	\$150		
60%	70	76	82	*90	*100	+114	\$132	\$149			
70%	70	77	85	*93	+106	+124	\$144				
80%	71	78	86	*97	+113	\$136					
90%	71	79	88	*102	+122						
100%	72	80	*91	+108							

\$ - Heatstroke imminent

+ - Heatstroke possible

* - Heat exhaustion possible

Heat exhaustion: Staff to ensure adequacy of water intake, look for signs of exhaustion. Five (5) minute rest breaks every hour.

Heatstroke possible: Staff to promote high water intake, five (5) minute rest break every one-half (1/2) hour-lay down, feet up. Reduce work by one-third (1/3).

Heatstroke imminent: Secure outside work or reduce work pace by one-half (1/2) to two-thirds (2/3). Ten (10) minute break every one-half (1/2) hour-lay down, feet up. Insist on excessive water intake.

Heat and Humidity: At high temperatures, the human body normally cools itself through the evaporation of perspiration. But humidity interferes with this process. The table above, from the National Weather Service, shows how discomfort and health risks grow as heat and humidity increase. Remember: Apparent temperatures may run 15 to 30 degrees higher in urban areas with their vast expanses of concrete and asphalt.



TEXAS DEPARTMENT
OF
CRIMINAL JUSTICE

NUMBER: AD-10.64 (rev. 4)

DATE: July 11, 2003

PAGE: 1 of 10

SUPERSEDES: AD-10.64 (rev. 3)
August 3, 1999

ADMINISTRATIVE DIRECTIVE

SUBJECT: TEMPERATURE EXTREMES IN THE TDCJ WORK PLACE

AUTHORITY: Section 493.006, Texas Government Code

Reference: American Correctional Association (ACA) Standards: 4-4153
and 4-4337

APPLICABILITY: Texas Department of Criminal Justice (TDCJ or Agency)

POLICY:

The purpose of this policy is to establish TDCJ guidelines to assist the unit/facility administration in adapting offender work assignments to temperatures in the work environment that cannot be controlled by the Agency. Guidelines for outside recreation are found in the *Recreation Manual*.

Every reasonable effort shall be made to prevent extreme temperature-related injuries in the workplace. As the TDCJ continues to expand and locate units/facilities throughout the State of Texas, it is apparent the decision of whether to expose offenders to extreme temperature (cold/heat) must be made by the on-site staff.

TDCJ offenders are, at times, required to work in conditions of extreme cold or extreme heat. Frequently, situations may occur that require the work be done regardless of the temperature or weather conditions. Problems of heat stress are more common than those presented by a very cold environment. Procedures and charts are provided to assist unit/facility officials in determining safe working conditions in both high and low temperature extremes. Offenders must be exposed gradually to extreme heat and cold weather conditions. Individuals should be exposed to no more than three (3) to four (4) hours at a time, until acclimated to existing weather conditions. Work periods may then be extended as the individual's physical adjustment occurs. Appropriate clothing must be worn to protect individuals from extreme hot/cold weather conditions at all times.

PROCEDURES:

Prior to exposing offenders to extreme temperature conditions (cold/heat), the Warden and involved Department Heads will ensure that appropriate measures are instituted which shall prevent cold/heat injury. The Warden and involved Department Heads are encouraged to consult medical staff to ascertain specific hazards. In all cases of temperature-related incidents or injuries, medical personnel must be notified immediately and upon arrival on the scene, the medical personnel shall take control of the situation. The injured individual should be removed from the existing environment by the most expeditious means available to receive proper medical treatment.

I. Extreme Cold Conditions**A. Determination**

1. The Warden shall use the Wind-Chill Index guidelines (Attachment A) and the local news/weather media for determining the safety of cold weather working conditions.
2. Clothing considered appropriate for offenders working in cold weather is thermal underwear, insulated jackets, cotton gloves, insulated hoods, leather gloves, and heavy work shoes and socks. Insulated hoods and leather gloves are generally reserved for offenders assigned to outside work assignments or to non-heated work areas on units/facilities located north of a line formed by Interstate 20 (I-20). Offenders working south of a line formed by I-20, who are required to work outdoors or in non-heated areas during cold conditions, shall also be provided insulated hoods, and leather gloves. The Wind-Chill Index (Attachment A) should be used to determine the need for insulated hoods, and leather gloves south of I-20. Appropriate clothing should be issued even when the index indicates little danger of exposure injury.
3. If guidance is needed, the medical department should be contacted to determine appropriate clothing and footwear to prevent cold injury, prior to exposing offenders to cold conditions.
4. Care should be taken to prevent perspiration which could soak clothing and thus compromise the insulating value of clothing.
5. Layers of clothing should be removed or added according to the effective temperature and the level of physical activity.

B. Symptoms

1. Hypothermia is a condition where the body loses heat faster than it can produce it. With the onset of this condition, blood vessels in the skin constrict (tighten) in an attempt to conserve vital internal body heat, thus affecting the hands and feet first.
2. If one's body continues to lose heat, involuntary shivers begin. This reaction is the body's way to produce more heat and is usually the first real warning sign of hypothermia.
3. Further heat loss produces speech difficulty, forgetfulness, loss of manual dexterity, collapse, and finally death.

C. Emergency Treatment

1. Bring the injured individual out of the cold and remove wet clothing.
2. Wrap the injured individual in warm blankets or clothing.
3. If frostbite exists, gently heat the affected area with warm water or warm towels. Do not rub the affected area, use heating pads, or hot water bottles.
4. The medical staff shall continue the treatment upon arrival at the site or when the patient is delivered to their control.
5. Apply the "ABC" of life support (open Airway, assist Breathing, and restore Circulation), if necessary.
6. If local cold injury is sustained, field personnel should administer the following First Aid procedures immediately.
 - a. Restrict individual from further duties or activities until severity is evaluated.
 - b. Remove all constricting items of clothing and footgear from injured areas.
 - c. Remove wet clothing and insulate individual with dry clothing and blankets, making sure the injured area is covered.
 - d. Do not rupture blisters.
 - e. Encourage consumption of warm, sweetened liquids.

- f. If a lower extremity is affected, treat as a stretcher patient by slightly elevating the affected lower extremity.
- g. If evacuation from cold requires travel on foot, do not thaw the affected area until the individual reaches medical help.
- h. Transport the individual to definitive medical care as soon as possible.

7. Types of Hypothermia

Hypothermics are divided into the following three (3) categories, depending on the degree of injury.

a. First category

Injured individuals are conscious, but cold, with rectal temperature above 90 degrees Fahrenheit. They should be handled carefully, insulated, and transported to definitive medical care.

b. Second category

Injured individuals are unconscious and with a rectal temperature of 90 degrees Fahrenheit or below. They should be handled carefully and insulated from further heat loss. If available, provide ventilatory assistance with oxygen and administer intravenous fluid. Then, transport to definitive medical care.

c. Third category

Injured individuals are those who are comatose with no palpable pulse and no visible respiration. Although they appear to be dead, the injured individual may have a slight chance of recovery if the rectal temperature is 60.8 degrees Fahrenheit (16 degrees Centigrade) or higher. If possible, medical personnel should proceed as follows:

- (1) Apply positive pressure ventilation with oxygen.
- (2) Judge the possibility of administering cardiopulmonary resuscitation (CPR). The decision of whether to administer CPR is probably more situational than medical, yet administration is controversial. Respiratory effort is lost long before cardiac function; yet, successful resuscitations

after an estimated three (3) hours of no heart beat have been reported. The number of successful resuscitations is growing rapidly with better understanding of physiology and more management experience. Consider the following before initiating CPR:

- (a) The difficulty in verifying, in the field, that the heart has stopped;
 - (b) The compromise of rescuers to administer procedure during evacuation;
 - (c) The ability to continue CPR during rescue;
 - (d) The likelihood that chest compression shall fibrillate or stop the slow-beating, sensitive heart; and
 - (e) The unlikelihood of continuing circulation by compressing a cold, stiff chest and heart muscle.
- (3) Insulate injured individual and transport to definitive medical care.

II. Extreme Heat Conditions

A. Determination

1. The Warden shall use the Heat and Humidity Matrix (Attachment B) to determine the heat index which is a factor in determining safe hot weather working conditions.
2. Guidelines to assist the Warden in making the determination can be found in the Heat and Humidity Matrix and by contacting the local news media to confirm specific temperature conditions.
3. When the temperature is over 85 degrees Fahrenheit, the Warden shall determine whether or not the work environment is safe by referring to the Heat and Humidity Matrix (Attachment B). At any point when the heat and humidity index indicates the possibility of heat exhaustion or heatstroke, the Warden will direct that the precautionary measures identified in the Heat and Humidity Matrix (Attachment B) be initiated immediately.

4. If the combination of temperature and humidity indicates that at least heat exhaustion is possible, precautionary measures must be implemented as stated in the Heat and Humidity Matrix (Attachment B).
5. If guidance is needed, the Warden is encouraged to consult medical sources to evaluate the hazards of the effective temperatures, and the hazard of sunburn and other results of ultraviolet radiation, prior to exposing offenders to extremely hot working conditions.
6. Offenders shall be provided and required to use clothing appropriate to the effective temperatures and the hazards imposed by ultraviolet radiation (usually light-weight, long-sleeved shirts can be used to an advantage in high heat and direct sunlight). Light hats are also recommended.
7. Drinking water shall always be available to offenders in conditions of hot weather. Sodium-containing liquids may be used, according to individual medical advice, depending on a offender's state of acclimatization to hot weather working conditions.
8. Newly assigned offenders, who may not be acclimated to the heat, should be evaluated medically prior to being subjected to significant heat stress, and should be closely monitored by supervisors for early evidence of heat intolerance.
9. High water intake, according to the Heat and Humidity Matrix (Attachment B), should be enforced.
10. Offenders under treatment with diuretics or drugs which inhibit sweating require special medical evaluation prior to assignment to work in extreme heat.

B. Symptoms

1. Heat Stroke symptoms are as follows:
 - a. Perspiring (sweating) is diminished or absent;
 - b. The skin is hot, dry, and flushed; and
 - c. Increased body temperatures, which if uncontrolled may lead to delirium, convulsions, and even death. Medical care is urgently needed.

2. Heat Cramps symptoms include the following:
 - a. Painful, intermittent spasms of the voluntary muscles following hard physical work in a hot environment; and
 - b. Cramps usually occur after heavy perspiring, and often begin at the end of a work shift.
3. Heat Exhaustion symptoms are as follows:
 - a. Profuse perspiring, weakness, rapid pulse, dizziness, nausea, and headaches;
 - b. The skin is cool and sometimes pale and clammy with perspiration;
 - c. Body temperature is normal or subnormal; and
 - d. Nausea, vomiting, and unconsciousness may occur.


C. Emergency Treatment

1. In all cases of temperature-related incidents or injuries, the First Aid process is to be initiated immediately by either security personnel or by other unit/facility staff.
2. The on-site personnel must immediately begin an attempt to decrease the offender's temperature by placing the offender in a cool area.
3. Only force oral fluid intake if the offender is conscious and able to safely swallow.
4. Remove heavy clothing or excess layers of clothing; saturate remaining lightweight clothing with water. Position victim in the shade with air movement past the victim; fan victim if necessary to create air movement.
5. If ice is available, put ice packs in armpit and groin areas.
6. All of these measures are to be taken while moving the offender in the most expeditious means available to continue with and obtain proper medical treatment.
7. Whenever medical staff are on-site, treatment is to continue as directed by the physician or medical staff.

8. In all cases of temperature related incidents or injuries, medical staff and the unit/facility Risk Management Coordinator shall be notified immediately.

III. Training

- A. Each Warden must ensure that training in the prevention of temperature extreme injury is provided by the unit/facility Medical Department to all supervisory personnel who manage offenders.
- B. Documentation of completed training by name and social security number shall be maintained by the Manager of Health Services/Facility Health Administrator. A copy of all training rosters shall be provided to the unit/facility Risk Management Coordinator and Human Resources representative (staff training). Additionally, all staff training will be documented on the In-Service Training Record (TNG-99).
- C. A standardized training program shall be developed by the TDCJ Department of Preventive Medicine in conjunction with the UTMB Department of Education and Professional Development.
 1. The initial extreme temperature conditions training is provided in the Pre-Service and In-Service Training sessions.
 2. The training is given in a group setting.
 3. All units/facilities are responsible for conducting an annual refresher standardized training program utilizing unit/facility-based medical staff.
 4. Requests for selected unit/facility training must be addressed to the TDCJ Director of Preventive Medicine.



Ed Owens
Deputy Executive Director

WIND-CHILL INDEX

Wind Speed in MPH	ACTUAL THERMOMETER READING (F)									
	50	40	30	20	10	0	-10	-20	-30	-40
	EQUIVALENT TEMPERATURE (F)									
CALM	50	40	30	20	10	0	-10	-20	-30	-40
5	48	37	27	16	6	-5	-15	-26	-36	-47
10	40	28	16	4	-9	-21	-33	-46	-58	-70
15	36	22	9	-5	-18	-36	-45	-58	-72	-85
20	32	18	4	-10	-25	-39	-53	-67	-82	-96
25	30	16	0	-15	-29	-44	-59	-74	-88	-104
30	28	13	-2	-18	-33	-48	-63	-79	-94	-109
35	27	11	-4	-20	-35	-49	-67	-82	-98	-113
40	26	10	-6	-21	-37	-53	-69	-85	-100	-116
Over 40 MPH (little added effect)	LITTLE DANGER (for properly clothed person)				INCREASING DANGER			GREAT DANGER		
					(Danger from freezing or exposed flesh)					

The human body senses "cold" as a result of both the air temperature and wind velocity. Cooling of exposed flesh increases rapidly as the wind velocity goes up. Frostbite can occur at relatively mild temperatures if wind penetrates the body insulation. For example, when the actual air temperature of the wind is 40 degrees Fahrenheit (4.4 degrees Celsius) and its velocity is 30 mph (48 km/h), the exposed skin would perceive this situation as an equivalent still air temperature of 13 degrees (-11 degrees Celsius).

Clothing considered appropriate and currently available in the inventory is thermal underwear, insulated coats, cotton gloves, insulated hoods, and the heavy work shoes with socks. Again, caution must be taken when exposure for longer periods of time occurs.

HEAT and HUMIDITY MATRIX

	AIR TEMPERATURE (Degrees Fahrenheit)										
	70	75	80	85	90	95	100	105	110	115	120
Relative Humidity	Apparent Temperature										
0%	64	69	73	78	83	87	*91	*95	*99	*103	+107
10%	65	70	75	80	85	*90	*95	*100	+105	+111	+116
20%	66	72	77	82	87	*93	*99	+105	+112	+120	\$130
30%	67	73	78	84	*90	*96	*104	+113	+123	\$135	\$148
40%	68	74	79	86	*93	*101	+110	+123	\$137	\$151	
50%	69	75	81	88	*96	+107	+120	\$135	\$150		
60%	70	76	82	*90	*100	+114	\$132	\$149			
70%	70	77	85	*93	+106	+124	\$144				
80%	71	78	86	*97	+113	\$136					
90%	71	79	88	*102	+122						
100%	72	80	*91	+108							

\$ - Heatstroke imminent

+ - Heatstroke possible

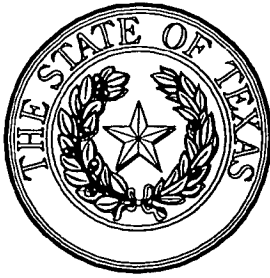
* - Heat exhaustion possible

Heat exhaustion: Staff to ensure adequacy of water intake, look for signs of exhaustion. Five (5) minute rest breaks every hour.

Heatstroke possible: Staff to promote high water intake, five (5) minute rest break every one-half (1/2) hour-lay down, feet up. Reduce work by one-third (1/3).

Heatstroke imminent: Secure outside work or reduce work pace by one-half (1/2) to two-thirds (2/3). Ten (10) minute break every one-half (1/2) hour-lay down, feet up. Insist on excessive water intake.

Heat and Humidity: At high temperatures, the human body normally cools itself through the evaporation of perspiration. But humidity interferes with this process. The table above, from the National Weather Service, shows how discomfort and health risks grow as heat and humidity increase. Remember: Apparent temperatures may run 15 to 30 degrees higher in urban areas with their vast expanses of concrete and asphalt.



TEXAS DEPARTMENT
OF
CRIMINAL JUSTICE

NUMBER: AD-10.64 (rev. 5)

DATE: August 9 2006

PAGE: 1 of 10

SUPERSEDES: AD-10.64 (rev. 4)
July 11, 2003

ADMINISTRATIVE DIRECTIVE

SUBJECT: TEMPERATURE EXTREMES IN THE TDCJ WORKPLACE

AUTHORITY: Section 493.006, Texas Government Code

Reference: American Correctional Association (ACA) Standards: 4-4153
and 4-4337

APPLICABILITY: Texas Department of Criminal Justice (TDCJ or Agency)

POLICY:

The Texas Department of Criminal Justice establishes guidelines to assist unit administration in adapting offender work assignments to temperatures in the work environment that cannot be controlled by the Agency. Guidelines for outside recreation are found in the *TDCJ Recreation Department Policy Manual*.

Every reasonable effort shall be made in preventing extreme temperature-related injuries in the workplace. Since the TDCJ has units throughout the State of Texas, the decision to expose offenders to extreme temperature (i.e., cold/heat) shall be made by the appropriate on-site staff.

TDCJ offenders are, at times, required to work in conditions of extreme cold or extreme heat. Frequently, situations may occur requiring the work be done regardless of the temperature or weather conditions.

PROCEDURES:

Prior to exposing offenders to extreme temperature conditions (i.e., cold/heat), the Warden and involved Department Heads shall ensure appropriate measures are instituted which prevent extreme temperature-related injuries. The Warden and involved Department Heads are encouraged to consult medical staff to ascertain specific hazards. In all cases of temperature-related incidents or injuries, medical staff and the Unit Risk Manager shall be notified immediately. Upon arrival on the scene, medical staff shall take control of the situation. The

injured offender shall be removed from the existing environment by the most expeditious means available to receive proper medical treatment.

- I. Procedures and exposure charts (Wind-Chill Index [Attachment A] and Heat and Humidity Matrix [Attachment B]) are provided to assist unit officials in determining safe working conditions in extreme temperature conditions.
 - A. Offenders shall be exposed gradually to extreme temperature conditions.
 - B. During work assignments, offenders shall be exposed to no more than three (3) to four (4) hours at a time, until acclimated to existing weather conditions. Work periods may then be extended as the offender's physical adjustment occurs. Appropriate clothing shall be worn to protect the offender from extreme temperature conditions at all times.
- II. Extreme Cold Conditions
 - A. Determination
 1. The Warden shall use the Wind-Chill Index, the local news/weather media, and/or weather conditions recorded by instruments located on the unit/picket gate in determining the safety of cold weather working conditions.
 2. Clothing considered appropriate for offenders working in cold weather shall include: thermal underwear, insulated jackets, cotton gloves, insulated hoods, leather gloves, and heavy work shoes and socks. The Wind-Chill Index shall be used in determining the need for insulated hoods and leather gloves. Appropriate clothing shall be issued even when the index indicates little danger of exposure injury.
 3. If guidance is needed, medical staff should be contacted prior to exposing offenders to cold weather working conditions to determine appropriate clothing and footwear to prevent cold injury.
 4. Care shall be taken to prevent perspiration which could soak clothing and thus compromise the clothing's insulating value.
 5. Layers of clothing shall be removed or added according to the effective temperature and level of physical activity.
 - B. Symptoms
 1. Hypothermia is a condition occurring when the body loses heat faster than it can be produced. With the onset of this condition, blood vessels in the

skin constrict (i.e., tighten) in an attempt to conserve vital internal body heat, thus affecting the hands and feet first.

2. If one's body continues to lose heat, involuntary shivers begin. This reaction is the body's way to produce more heat and is usually the first real warning sign of hypothermia.
3. Further heat loss produces speech difficulty, forgetfulness, loss of manual dexterity, collapse, and finally death.

C. Types of Hypothermia

Hypothermics are divided into the following three (3) categories, depending on the degree of injury.

1. Category One

Injured individuals are conscious, but cold, with a rectal temperature above 90 degrees Fahrenheit (°F). These individuals should be handled carefully, insulated, and transported to medical care.

2. Category Two

Injured individuals are unconscious and with a rectal temperature of 90°F or below. These individuals should be handled carefully and insulated from further heat loss. If available, caregivers should provide ventilatory assistance with oxygen and administer intravenous (IV) fluid. Then, the caregivers should transport the individual to medical care.

3. Category Three

Injured individuals are comatose with no palpable pulse and no visible respiration. Although these individuals appear to be deceased, the injured individual may have a slight chance of recovery if the rectal temperature is 60.8°F or higher. If possible, medical staff shall proceed as follows:

- a. Apply positive pressure ventilation with oxygen.
- b. Judge the possibility of administering successful cardiopulmonary resuscitation (CPR). Situational factors shall determine if CPR shall be administered with the following considerations:
 - (1) The difficulty in verifying that the heart has stopped without medical equipment;

- (2) The compromise of rescuers to administer procedure during evacuation;
 - (3) The ability to continue CPR during rescue;
 - (4) The probability of chest compressions fibrillating or stopping a slow-beating, sensitive heart; and
 - (5) Continuing circulation by compressing a cold, stiff chest and heart muscle is unlikely.
- c. The injured individual should be insulated and transported to a medical care facility.

III. Extreme Heat Conditions

A. Determination

1. Guidelines assisting the Warden in making the determination can be found in the Heat and Humidity Matrix. Weather conditions recorded by instruments on the unit/picket gate or reports by the local news media shall be used confirming specific temperature and humidity conditions. When the temperature is over 85°F, the Warden shall use the Heat and Humidity Matrix to determine the heat index. The heat index shall be used as an indicator of the risk for heat-related injury.
2. At any point when the Heat and Humidity Matrix indicates the possibility of heat exhaustion or heatstroke, the Warden shall instruct the appropriate staff to immediately initiate the precautionary measures identified in the Heat and Humidity Matrix.
3. If guidance is needed, medical staff should be contacted prior to exposing offenders to extremely hot working conditions to evaluate the hazards of the current temperatures and humidity, including indoor work areas (e.g., a boiler room). The hazard of sunburn and other results of ultraviolet (UV) radiation shall also be closely monitored.
4. Offenders shall be provided and required to wear clothing appropriate for the effective temperatures and the hazards imposed by UV radiation (e.g., light-weight, long-sleeved shirts can be used to an advantage in high heat and direct sunlight). Light-colored hats are also recommended.
5. Drinking water shall always be available to offenders in conditions of hot weather. According to individual medical advice, liquids containing

sodium may be used depending on an offender's state of acclimatization to hot weather conditions.

6. Newly assigned offenders, who may not be acclimated to the heat, shall be medically evaluated prior to exposure to significant heat stress, and should be closely monitored by supervisors for early evidence of heat intolerance.
7. High water intake, according to the Heat and Humidity Matrix, shall be enforced.
8. Offenders under treatment with diuretics or drugs inhibiting sweating require special medical evaluation prior to assignment to work in extreme heat.

B. Symptoms

1. Heat stroke symptoms include:
 - a. Diminished or absent perspiring (sweating);
 - b. Hot, dry, and flushed skin; and
 - c. Increased body temperatures, which if uncontrolled may lead to delirium, convulsions, and even death. Medical care is urgently needed.
2. Heat cramp symptoms include:
 - a. Painful, intermittent spasms of the voluntary muscles following hard physical work in a hot environment; and
 - b. Cramps usually occurring after heavy perspiring, and often beginning at the end of a work shift.
3. Heat exhaustion symptoms include:
 - a. Profuse perspiring, weakness, rapid pulse, dizziness, and headaches;
 - b. Cool skin, sometimes pale and clammy, with perspiration;
 - c. Normal or subnormal body temperature; and
 - d. Nausea, vomiting, and unconsciousness may occur.

IV. Emergency Treatment

A. In all cases of temperature-related incidents or injuries:

1. The first aid process shall be initiated immediately by either security or other unit staff.
2. Medical staff and the Unit Risk Manager shall be notified immediately.

B. In extreme cold conditions:

1. Bring the injured offender out of the cold and remove wet clothing;
2. Wrap the injured offender in warm blankets or clothing;
3. If frostbite exists, gently heat the affected area with warm water or warm towels. Do not rub the affected area; use heating pads or hot water bottles;
4. Medical staff shall continue the treatment upon arrival at the site or when the offender is delivered to the medical staff's care;
5. Apply the "ABC" of life support (open Airway, assist Breathing, and restore Circulation), if necessary; and
6. If cold injury is sustained, the following first aid procedures shall be administered immediately:
 - a. Restrict the offender from further duties or activities until severity is evaluated;
 - b. Remove all constricting items of clothing and footgear from injured areas;
 - c. Remove wet clothing and insulate the offender with dry clothing and blankets, ensuring the injured area is covered;
 - d. Do not rupture blisters;
 - e. Encourage consumption of warm, sweetened liquids;
 - f. If a lower extremity is affected, treat as a stretcher patient by slightly elevating the affected lower extremity;
 - g. If evacuation from cold requires travel on foot, do not thaw the affected area until the offender reaches medical help; and

h. Transport the offender to medical care as soon as possible.

C. In extreme heat conditions:

1. Immediately begin an attempt to decrease the offender's temperature by placing the offender in a cool area;
2. Only force oral fluid intake if the offender is conscious and able to safely swallow;
3. Remove heavy clothing or excess layers of clothing; saturate remaining lightweight clothing with water. Position the offender in the shade with air movement past the offender; fan the offender if necessary to create air movement;
4. If ice is available, place ice packs in armpit and groin areas;
5. Take all of these measures while moving the offender in the most expeditious means available to continue with and obtain proper medical treatment; and
6. Ensure, whenever medical staff are on-site, treatment is to continue as directed by the physician or medical staff.

V. Training

- A. Each Warden shall ensure training in the prevention of temperature extreme injury is provided by the unit Medical Department to all unit staff and all offenders.
- B. Documentation of completed training by employee name and date of birth and offender name and TDCJ number shall be maintained by the Manager of Health Services/Facility Health Administrator. A copy of all training rosters shall be provided to the Unit Risk Manager, Human Resources Representative (staff training), and Risk Management Central Office.
- C. A standardized training program shall be developed by the TDCJ Department of Preventive Medicine in conjunction with the University of Texas Medical Branch (UTMB) Department of Education and Professional Development.
 1. The initial extreme temperature conditions training is provided in the Pre-Service Training sessions, and additional training shall be provided in annual In-Service Training sessions.
 2. The training is given in a group setting.

3. All units are responsible for conducting an annual standardized training program utilizing unit-based medical staff.
4. Requests for selected unit training shall be addressed to the Director for Preventive Medicine.

Ed Owens
Deputy Executive Director

WIND-CHILL INDEX

Wind Speed in MPH	ACTUAL THERMOMETER READING (°F)									
	50	40	30	20	10	0	-10	-20	-30	-40
CALM 5 10 15 20 25 30 35 40	EQUIVALENT TEMPERATURE (°F)									
	50	40	30	20	10	0	-10	-20	-30	-40
	48	37	27	16	6	-5	-15	-26	-36	-47
	40	28	16	4	-9	-21	-33	-46	-58	-70
	36	22	9	-5	-18	-36	-45	-58	-72	-85
	32	18	4	-10	-25	-39	-53	-67	-82	-96
	30	16	0	-15	-29	-44	-59	-74	-88	-104
	28	13	-2	-18	-33	-48	-63	-79	-94	-109
	27	11	-4	-20	-35	-49	-67	-82	-98	-113
26	10	-6	-21	-37	-53	-69	-85	-100	-116	
Over 40 MPH (little added effect)	LITTLE DANGER (for properly clothed person)				INCREASING DANGER (Danger from freezing or exposed flesh)			GREAT DANGER		

The human body senses “cold” as a result of both the air temperature and wind velocity. Cooling of exposed flesh increases rapidly as the wind velocity goes up. Frostbite can occur at relatively mild temperatures if wind penetrates the body insulation. For example, when the actual air temperature of the wind is 40°F and its velocity is 30 mph (48 km/h), the exposed skin would perceive this situation as an equivalent still air temperature of 13°F.

Clothing considered appropriate and currently available in the inventory is thermal underwear, insulated coats, cotton gloves, insulated hoods, leather gloves, and heavy work shoes and socks. Again, caution shall be taken when exposure occurs for longer periods of time.

HEAT AND HUMIDITY MATRIX

	AIR TEMPERATURE (°F)										
	70	75	80	85	90	95	100	105	110	115	120
Relative Humidity	Apparent Temperature										
0%	64	69	73	78	83	87	*91	*95	*99	*103	**107
10%	65	70	75	80	85	*90	*95	*100	**105	**111	**116
20%	66	72	77	82	87	*93	*99	**105	**112	**120	***130
30%	67	73	78	84	*90	*96	*104	**113	**123	***135	***148
40%	68	74	79	86	*93	*101	**110	**123	***137	***151	
50%	69	75	81	88	*96	**107	**120	***135	***150		
60%	70	76	82	*90	*100	**114	***132	***149			
70%	70	77	85	*93	**106	**124	***144				
80%	71	78	86	*97	**113	***136					
90%	71	79	88	*102	**122						
100%	72	80	*91	**108							

* Heat exhaustion possible

** Heatstroke possible

*** Heatstroke imminent

Heat Exhaustion: Staff shall ensure adequacy of water intake, look for signs of exhaustion. Five (5) minute rest break every hour.

Heatstroke Possible: Staff shall promote high water intake, five (5) minute rest break every one-half (1/2) hour-lay down, feet up. Reduce work by one-third (1/3).

Heatstroke Imminent: Secure outside work or reduce work pace by one-half (1/2) to two-thirds (2/3). Ten (10)-minute break every one-half (1/2) hour; lay down, feet up. Insist on excessive water intake.

Heat and Humidity: At high temperatures, the human body normally cools itself through the evaporation of perspiration, but humidity interferes with this process. The above table, from the National Weather Service, shows how discomfort and health risks grow as heat and humidity increase. Remember: Apparent temperatures may run 15 to 30 degrees higher in urban areas with their vast expanses of concrete and asphalt.